

ORNITHOLOGICAL NOTES FROM WESTERN
MEXICO AND THE TRES MARIAS AND ISA-
BELLA ISLANDS.

BY H. H. BAILEY.

HAVING heard from my friend, the late Walter E. Bryant, of a number of business propositions in his section (Western Mexico) I decided to take a trip down and look them over and also do a little collecting. After a hasty gathering together of things for the trip I sailed for San Blas, Mexico, February 11, 1905, on the Pacific Mail Steamer 'City of Sydney,' and arrived at Mazatlan February 17. Mazatlan and the Tres Marias Islands were of particular interest to me from an ornithological standpoint. It was here that the well known ornithologist, the late Col. A. J. Grayson, collected, and later published the first information regarding the ornithology of the Tres Marias Islands and Isabella Island, all of which I hoped to visit before returning to the States.

The rocks forming part of the harbor entrance of Mazatlan, with a number of others lying to the north of it, were covered with Heermann's and Western Gulls and California Brown Pelicans, while numbers of boobies, which I afterwards found to be the Blue-footed Booby, were fishing in a little channel forming a slight break in the north side of the harbor proper. A full day was spent here while the steamer took on and discharged cargo, and from an old darky boatman that spoke English, I learned that it was easier to get to Isabella Island from San Blas than from Mazatlan. Isabella Island was passed on the way down to San Blas, which was reached the next day, February 19. The steamer anchored about two miles off shore, which was reached by a small twenty-foot boat run by the natives. From a native who spoke a little English, I learned that the Plateno Rancho and Don Walterio, as they called Mr. Bryant, were ten miles away, across a small bay, reached in a ten-foot dugout or canoe. So, after some trouble in finding a man to take me over, I bundled my luggage into a canoe and set sail. On arrival at the ranch landing, some two hours later, I found one of the fiercest looking crowds lined up to greet

me I think I ever saw, machetes and knives being everywhere in evidence, so much so that I came near giving up, right then and there, all thoughts of business and ornithology. However, as I was not slaughtered on the spot, I took courage, and after repeated inquiries as to Don Walterio, managed to make myself understood, and with three mosos stringing behind with my luggage, set forth for the ranch house, three quarters of a mile distant, through the banana plantation of which Mr. Bryant was superintendent. The dogs soon announced my approach, and as I reached the shelter of the porch he came out to greet me. Which of the two was the more glad to see the other will never be answered. The rest of the afternoon and evening were spent in telling the latest news from civilized parts, and in getting in return points regarding the birds, the lay of the land, and the business I had come down to transact.

San Blas is a small coast port in the Territory of Tepic, with about three thousand inhabitants, in latitude 20° – 21° and longitude 105° – 106° . The town, which consists of a few stores, government buildings and a number of brick and wooden houses of the better class, besides the regular palapi houses of the natives, is situated close to the beach at the mouth of the estero which forms all the harbor the place affords, and is available for only the smaller craft. The surrounding country is level for a few miles and has been cultivated to some extent, but most of the crops come from the Santiago district, some twenty miles away on the banks of the river of that name. About five miles northeast of the town the mountains begin, running parallel to the coast line and swinging to the south on the other side of the bay, directly back of the banana ranch. Here are two of the highest peaks in the whole range; they are the compass of the San Blas sailor, as will be shown later on in my story. The estero forming the harbor for San Blas is one of the three mouths of the Santiago River, and runs northward parallel to the coast line for about fifteen miles until it meets the main channel of the river. This river and its banks, which at low tide are hard black sand, offer many opportunities to the ornithologist in the way of water birds, while the natives gather from the bushes, partly covered by water at high tide, a small oyster, relished by native and tourist alike, and which forms one of the staple articles of food for that section and is also shipped inland.

A number of small groves of cocoanut palms give shade to the town and supply nesting places for parrots, woodpeckers, crows, blackbirds, and orioles, and a roosting place for the ever present vultures which, with the aid of the chickens and hogs, take the place of a sanitary department. The land that is or has been cultivated in years past has on it a few scattered trees which afford nesting sites for some of the commoner birds, while the bushes and undergrowth bordering the roads are literally alive with quail, doves, parrots, parakeets, Groove-billed Anis, trogons, and numerous small birds, which from sunrise till about 7.30 A. M. make one think all the birds in the whole Territory are congregated there. With the two mouths of the Santiago River, one at the front of the town, the other to the south of it, and the good shore line of sandy beach, one can get all he desires in the way of water birds; and, taking it all in all, this particular section is certainly an ideal place for collecting. But with all these inducements, don't think for an instant that all you have to do is to walk out and load up with land and water birds without any trouble. Along the beaches the mosquitoes and a very small species of sand fly make you long to get back to the net shelter in your room, while the same little plagues attend collecting in the fields, with the addition of the black ant, which stings with its tail, and the "weaners," a very small species of tick — so small as to be hardly distinguishable except when in bunches of thousands on your clothes. These weaners are on every blade of grass and bush, and one has to change his clothes immediately in coming in from the field, smoking them thoroughly being about the only way to get them off. About all the collecting must be done from day-break to 7 or 8 o'clock, on account of the heat, and after about 8 o'clock all the birds have retired to the undergrowth for the day, from which it is almost impossible to dislodge them or to get one should you shoot it. The rainy and hot season is said to last from about June 15 until the 1st to the 15th of November, during which period this section is visited by destructive thunderstorms or chubascos.

From February 18 until March 11 a little collecting was done on and around the banana ranch, with a few days at San Blas, and during this period the majority of the commoner birds were secured. An estero at the foot of the mountains and back of

the ranch house engaged my attention for a number of mornings. The trees and palms overlapped, forming a complete canopy for the streams, and it was down this shady way that the birds were wont to pass daily in their search for food, at about 8 A. M. Although it seemed as though thousands passed me, I was never able to find out where they went on reaching the mouth of the estero.

While in San Blas, on March 1, I was fortunate in meeting Mr. Geo. Beermaker, manager for the Union Fertilizer Company of Los Angeles, Cal., and as he was sailing for the Tres Marias Islands that night, I engaged passage and board on the island for the trip. When we left, at 10.30 P. M., the wind was fair and light, as it always is at night at that time of year, and after a good night's sleep, rolled up in a blanket on top of the cabin trunk, we arose to find the islands still many miles away. That day and most of that next night we were rolling on the long easy swells without a breath of air to fill our sails, and bird life seemed also to have vanished with the wind. A few Heermann's and Western Gulls came near the boat, and a few pairs of Man-o'-War Birds and Red-billed Tropic Birds were sailing gracefully high in the air. After beating back and forth in the light wind that sprung up toward daybreak, we arrived off White Rock about 5.30 A. M. and cast anchor. Some fifteen men and two women were already settled in palapi houses on the small stretch of sandy beach at the foot of the highest cliff, and the white tents of the 'boss' looked very inviting at that hour of the morning. We landed in a small canoe, reaching the beach without getting much wet, and the little twenty-ton schooner 'Concha Sofia' set sail for San Blas, to return for us in about ten days, with supplies, mail, etc., from the mainland. White Rock lies almost directly between Magdalena and Cleofa Islands separated from the latter by a narrow rough channel of about half a mile in width, and about ten miles from the former, in longitude 106°-107°, latitude 21°-21½°. As one would infer from its name, this island is solid rock, the highest point of which is about 200 feet above sea level, and the top for the most part is a nearly level plateau. The walls rise almost perpendicularly from the sea, and outside of a small stretch of sandy beach on which our camp was placed, it is almost impossible to land. The natives had already

cut a narrow trail to the top, about nine inches wide, and while they ran easily up and down it, most novices perspire freely from fear the first few times of ascent and descent. It was not long, however, before I could go up and down without this inconvenience, but I was never able, with my heavy boots, to do so with the ease that the natives did with their bare feet or light leather soles.

After seeing my stuff safely stored in the tent, which Mr. Beer-maker most kindly shared with me, I set out for the top of the island, and after the experience just related in connection with the trail I gained the top. On casting my eyes about, rather a novel sight met my gaze. A gang of natives were picking up chunks of guano, a few pairs of Man-o'-War Birds floated lazily overhead, screaming Red-billed Tropic Birds circled the rock, Boobies were coming and going to their roosting places on the sides of the cliffs, and on either hand were the wooded islands. The rest of the day was spent in a systematic search of the island, and I returned to camp well satisfied with my first day's work. The next day work commenced in earnest, numerous birds, lizards and photographs being secured, and out of a cover from a dry goods box, supported by four sticks, a skinning table was erected under the shelter of the overhanging cliff.

As White Rock contained no water for drinking and cooking, and as the only wood was the drift wood the waves brought in, we were compelled to send the canoe to Cleofa Island about every third day for water and wood. I decided to accompany the canoe party on its first trip after my arrival, and, with gun, collecting pistol, and camera, left camp about 6 A. M. The stream in Cleofa having the most water and nearest to our camp came down from the hills on the seaward side of the island, and this necessitated our landing through the surf. The landing was successfully made, and after a full day spent on the island I returned to the canoe loaded down with birds, every pocket of my skeleton coat filled, and some dozen or more good photographs.

But no such good luck attended our departure. On the first attempt to launch the canoe we were swamped by the breakers, and the canoe being overturned, I lost my gun, my birds were spoiled for specimens, and my camera was nearly ruined. On a second trial, however, we passed safely through.

Three weeks were spent on the "Rock," during which time a number of Brewster's Boobies were caught while roosting at night on the top of the island, and Red-billed Tropic Birds were secured in the daytime while on their eggs or with their young. A series of both species, with young of the latter, were put up.

Another trip was made to Cleofa Island in the canoe, and this time we fared as previously, only everything was tied in so that we lost nothing except all the small birds I had gotten with my collecting pistol, with the exception of one Cardinal, which is now in my collection and whose plumage still shows the wetting it got.

During our stay at the Rock the schooner in which we came was wrecked at San Blas by a 'chubasco' when ready to start on her return trip with mail and supplies, and we made our return in a leaky open twenty-foot yawl boat sent out in place of the wrecked schooner.

A few days were spent at Tepic, the capital of the Territory and some fifty miles inland by stage coach. Here I managed to get my camera partly fixed, my watch repaired, and collected a few birds, besides attending to other business I had on hand. From here a trip was made to Santiago by stage, some twenty miles, and it was my intention to go down the river from here to San Blas by canoe, but it proved impracticable and I returned by stage.

On arriving at San Blas I secured a boat and crew and on April 6, at 8 P. M., set sail for Isabella Island, some forty miles northwest of San Blas and twenty miles off the coast. My boat this time was an open twenty-five foot ship's yawl, well caulked, and manned by a captain and two boys. The wind was, as usual, light, but by the next noon the captain pointed out an island and said it was Isabella.

Later on I discovered it was only one of the Tres Marias group, and it was then that I learned that he could not read the compass and was really steering by taking observations by the two tall peaks back of the Plateno Rancho. On returning later to San Blas I found that these peaks were the compass of most of the sailors in that section. The second night out a 'chubasco,' somewhat in the form of a waterspout, passed within a quarter of a mile of us, and the next morning, Sunday, the 8th, found us still about fifteen miles from the island with no breeze, and it was not

until 3.30 P. M. that we landed on the little stretch of sandy beach in the bay on the south side of the island. All during this day we were in sight of large flocks of birds following schools of fish; those which I distinguished were Brewster's Booby, Red-billed Tropic Bird, Heermann's Gull, Man-o'-War Bird, Black Petrel, and Wedge-tailed Shearwater. A number of puffins and small gulls were also seen, but could not be identified.

Isabella Island is three quarters of a mile long by about half a mile wide, 150 feet high at its highest point, with a crater of an extinct volcano almost in the middle of the island. It lies in longitude 105° – 106° , latitude 22° – $22\frac{1}{2}^{\circ}$. The northeastern side of the island is covered with long grass about sixteen inches high, while the southwestern side is high and rocky, with stunted trees or bushes scattered here and there. The central part of the island, with the exception of the crater, is low and rocky and covered with bushes, which also cover the sides of the crater. After landing our stores and anchoring the boat out in the little bay, the crew pitched camp, making a tent out of the mainsail and using the jib for a floor covering to sleep on. Nearly four days were spent on the island, during which time I was busily engaged in skinning birds, taking photographs, and collecting eggs of the Blue-footed Booby, Red-billed Tropic Bird, and Man-o'-War Bird. A small Tern — the Pacific Sooty — had already bred and gone, as had also the Royal Tern. One day the crew found a nest of young Great Blue Herons which I had overlooked when going over the island. As the man who had supplied us with provisions had somewhat neglected us, these young birds came in well for food, and were relished by us, as were also fresh eggs of the Blue-footed Booby and Man-o'-War Bird, which we made into omelets. On the afternoon of the third day one of the boys set the long grass on the northeastern side of the island on fire, which burned for twenty-four hours and threatened to drive us from the island. Luckily at this time there were no birds breeding on that part of the island, and by the time we left the fire had burned itself out. With the exception of the boat drifting ashore on the sandy beach one stormy night, which caused no damage, there were no mishaps or startling experiences while on the island. About noon of the 12th we started back for San Blas, and as we had a very heavy fair wind

we made port in about eight hours, stopping on the way to look over a large white rock called Piedra Blanca, in hope of finding some birds breeding there. But in this we were disappointed, as the fishermen were constantly visiting the rock, and while the birds roosted there, none were found breeding.

On my arrival at San Blas I was met by the Capatas of the rancho, who informed me that Mr. Bryant had been very ill ever since my departure, and begging me to come over to the rancho at once, which I did. On arriving at the house, I found him in quite bad shape. As he had had little nourishing food proper for a sick man for some seven days, I at once killed some Chachalacas and doves to make soup of. The next nine days were spent attending to Mr. Bryant's wants, blowing eggs, and collecting a few birds, and on the 21st of April, after packing up his belongings I managed to get him aboard the steamer bound for San Francisco. From this time on to the 3d of May, a few specimens were collected around San Blas during spare time, and on the afternoon of that date I came down with a bad attack of fever, called "colentura" in that section. This laid me up for nearly ten days. On the 17th I caught the steamer for San Francisco. The following day was spent at Mazatlan, and eight days later I arrived off the quarantine station in San Francisco Bay. At this season of the year extra precautions were being taken to guard against yellow fever from the south, and after a rigid inspection I failed to pass and was not allowed to land, being sent to the quarantine station at Angel Island. After remaining here until the authorities were satisfied that I would not come down with yellow fever or any other contagious disease, I was allowed to depart and was sent over to the city by a tug. On the way to the hotel I learned of the death of my friend Mr. Bryant, this being the first news I had heard of him since bidding him good-by at San Blas. Poor Bryant! He was a devoted ornithologist, and well do I remember his last words to me as we parted on the ship: "Bailey, we will get a whack at the hummers down here yet."

Thus ended my trip, which was rather successful in a business way and, even counting hardships and mishaps, was enjoyable, and added many fine specimens of birds, eggs, and a few mammals and insects to my collection.

The following is a list of the birds collected or observed during this trip to San Blas and the neighboring islands.

Annotated List of Birds.

1. **Uria troile californica.** CALIFORNIA MURRE.—Large numbers of these birds were seen from the steamer when going south, and for at least a day before arriving at the Golden Gate coming northward.

2. **Larus occidentalis.** WESTERN GULL.—These birds were common all during the trip, following the steamer both going and coming, and also common on the beaches of the mainland at and near San Blas. On White Rock and Isabella Islands, flocks of from twenty to thirty were ever present while I was skinning birds, and fought for the bodies as I threw them out to them. While I was not engaged in skinning specimens, these birds strutted around camp picking up scraps, and also followed me as I walked over the islands, and if I scared a parent Booby or a Man-o'-War Bird from its nest, not many seconds elapsed before the gulls had their eggs. No nests of this species were discovered on any of the islands or the mainland.

3. **Larus heermanni.** HEERMANN'S GULL.—These birds, like the Western Gull, were ever present on the shores of the mainland, especially near the mouth of the estero, also on both Isabella Island and White Rock. Their habits were similar to those of the Western Gull as regards waiting for bodies to be thrown out to them, stealing eggs, etc., and occasionally they followed a Booby and tried to make it disgorge. One day while sitting on a rock in front of camp at White Rock waiting for lunch, I saw one of a pair of Great Rufous-bellied Kingfishers fishing from a rock about twenty feet further on. As it returned to its perch from one of its little plunges, a Heermann's Gull swooped down and tried to get its food before it could be swallowed. The kingfisher dove to the water and at each descent of the gull, dove below, these tactics being kept up until the gull got disgusted and left. From the actions of some pairs on a rock to the north of Isabella Island I am sure these birds were breeding there, and also on a rock off Cleofa Island, neither place being accessible.

4. **Sterna maxima.** ROYAL TERN.—This large tern was seen on the beaches of the mainland between San Blas and the Platenio Rancho in small flocks of from four to eight. A number also were seen on Isabella Island, where I am positive they had bred previously to my arrival on April 8, as I found a number of nests with egg shells near by, placed on the northern edge of the island. Being very familiar with the eggs of this species I am sure I was not mistaken in their identity.

5. **Sterna antillarum.** LEAST TERN.—For about ten days around April 12 these little terns were common at the mouth of the estero at San Blas, where they were feeding upon schools of small fish which came down with the current. At the time of my departure, May 17, they had entirely disappeared, going northward.

6. *Sterna fuliginosa crissalis*. PACIFIC SOOTY TERN.—I had been told by both the captain of my boat and Mr. Geo. Beermaker, that on the northern grassy slope of Isabella Island I would find thousands of a small white gull breeding, but on going over the ridge I found to my sorrow that they had bred and gone. Everywhere scattered amongst the tall rank grass could be seen the well worn nests of the season, and so thick were they that we could hardly step without treading on a nest. But what puzzled me most was the number of skeletons of dead birds scattered everywhere about. The skeletons were almost complete, with the long wing feathers, tail and head feathers still in place, so I presume that either the gulls or crabs and lizards had eaten everything clean. If these were old birds, and the remains proved clearly that they were, what could have killed them? and what had become of the eggs? as I was unable to find a single nest with even spoiled eggs in it. I should estimate that at least five hundred dead birds were seen, and the cause of their death will have to be explained by some one arriving in time for, and staying through, the breeding season. Mr. Beermaker informed me that when visiting the island the previous year, the last of March, these birds were just laying, but as I paid my visit to their nesting site on April 8, they must breed earlier some seasons than others. A single skeleton was saved and is now in my collection. Large flocks of these terns were seen off Isabella Island, following schools of small fish, and a few roosted on the rocky face of the southeastern end of the island during the daytime.

The cries of this bird, with the squak of the boobies, were most noticeable after dark, and as they could be seen and heard going and coming at all times of night, they probably gather as much food by night as by day.

7. *Puffinus cuneatus*. WEDGE-TAILED SHEARWATER.—A number of birds which I took to be of this species were seen between Cape St. Lucas and Mazatlan, but none were taken, neither were they seen near the coast of San Blas nor around the islands, excepting Isabella.

8. *Oceanodroma melania*. BLACK PETREL.—This species was very common between the mainland and islands, and from what I learned they must have bred on the lower end of Cleofa Island, and on White Rock later in the season, although no eggs were taken during my stay at the latter place.

9. *Phaëthon æthereus*. RED-BILLED TROPIC BIRD.—This beautiful bird I first found breeding on White Rock, and during my stay of three weeks, a number of cavities containing their nearly fully fledged young were discovered, and also fresh eggs. On Isabella Island, April 8 to 12, nearly full grown young and a number of fresh eggs were also found, so I imagine they have two settings. In every case an old bird was found in the cavity with young or eggs, and from a broken and sucked egg I found in one, I am inclined to think that the Western or Heermann's Gulls even entered here for food. If such is the case I know they had a hard time

to get it, as I found quite often to my sorrow that the Tropic Bird's powerful, sharp beak would penetrate through my canvas hat, or if the cavity was large enough to permit of it, my heavy canvas jacket. While one of the old birds is always on the nest and gives its shrill scream at the approach of danger, thus making the cavity easily located, the young or egg is not so easily reached as one would think. Only in one case did I find an old bird on its nest where I could photograph it, that case being under a ledge of a cliff and about eighteen inches from the face. The majority were in cavities from two to three feet back, and it takes quite a lot of manœuvring to get either bird or egg out. The majority of the birds I found were in poor plumage, the constant going in and out of the small nesting cavities having worn the beautiful long tail feathers until some of the ends had broken off, while others captured had none or new ones just growing out. Their flight is not unlike that of the terns, and the rapid wing beat and long tail feathers make this bird readily distinguishable from any other at a great distance. Both birds take turns in incubating and caring for the young, and during this period the bird in the cavity is fed by its mate. The female, and sometimes both birds, is found in the cavity for three or four days before the single egg is deposited. While graceful on the wing this bird is most awkward on its feet, and when alighting to look for a nesting site drags itself along like a bird with both legs broken. The coloring of a series of eggs in my collection varies from a creamy dirty yellow ground color, spotted with a darker yellow, to a dark red ground color, spotted with a darker red.

Two cases of removing their young happened while I was on White Rock, both of them similar. Two old birds and their single young were found in a cavity, and I took one old bird to skin that night, expecting to get the remaining parent and young the next morning. On returning the next day great was my astonishment to find the two birds gone, and still further was it taxed when I found, after careful search, the two birds in another cavity twenty to thirty feet away.

9. *Sula nebouxii*. BLUE-FOOTED BOOBY.—This species I did not find south of Isabella Island, where they were breeding abundantly. Few were seen fishing to the south of the island, and while the largest colony was situated on the beach of the cove on the south side, they invariably passed out of the entrance and, circling the island, did their fishing northward. I am inclined to think that these birds never nest near colonies of *Sula brewsteri*, nor do the two species fish over the same area. I should be glad to get other persons' opinions on this subject. At the time of my departure from Isabella Island, April 12, a number of pairs of *Sula brewsteri* had arrived and had started to build nests on a small rocky point forming part of one arm of the bay on the south side of the island, but I am inclined to think their arrival here to nest was caused by the treatment they had received on their own nesting grounds — White Rock. The cause of this departure will be explained later on under that species.

All around our camp, which was pitched under the low bushes bordering the little bay, were pairs of boobies, one or the other of the pair covering the eggs while the mate stood close by. This, however, was during the middle of the day, the fishing being mostly done before ten A. M. and after four in the afternoon, during which time one or the other of the birds always remained on the eggs to keep the gulls from stealing them. The poor boobies had a hard time of it here, as the Man-o'-War Birds nested just back of them in the bushes, and lucky was the booby who passed in the entrance of the bay without having to disgorge part, or maybe the whole, of its day's catch to this robber. Numbers of nests were on the sandy beach just above high tide, while others were still further back under the shrubbery and below the Man-o'-War Birds, and still another colony was situated on the top of the rocky southwestern side of the island. All the birds were very tame, and I think had not been molested since the expedition of the Biological Survey in 1897, as Mr. Beermaker on landing in search of guano deposits in March, 1904, had not found them breeding at that time, nor had he disturbed them in any way. When I first started in to get a series of eggs, I used my foot to remove the booby from them, but after the first few attempts I found that the sharp beak whenever it came in contact with my leg drew blood, and almost penetrated through my cowhide boots, so I soon abandoned this method. Two eggs were generally the complete set and but three sets of three were discovered while on the island, and in some cases highly incubated *single* eggs were found. In case of the latter I am inclined to think the gulls had stolen one of the eggs after incubation had commenced. No nest was made, a slight hollow being scratched in the sand or earth, while those on the rocky side of the island simply deposited them on the bare rock or on the little drifted earth that happened to be on its surface. During the moonlight nights these boobies could be seen going and coming, and I have no doubt their best catches were made at this time, as they were then unmolested by the Man-o'-War Birds. Single fresh eggs gathered by the crew were made into omelets, but the flavor was rather rank.

10. ***Sula brewsteri*.** BREWSTER'S BOOBY.—This species was common along the coast at San Blas, roosting on the small rocks near the shore and on a large white rock some ten miles west of San Blas, called Piedra Blanca, but on none of these rocks did they breed. All the birds in this section belonged to the colony breeding on White Rock, and many traversed the sixty miles back and forth daily from their nesting and roosting place on the Rock to their feeding grounds near the coast. Never did I see a Blue-footed Booby in this section; hence my assertion that the Brewster's Boobies went east and south from their colony to fish, while the Blue-footed Boobies went northward. Thousands of these boobies were roosting on White Rock and some few had been laying previous to our arrival, but as the workmen had robbed the nests as fast as eggs had been deposited, the birds had become disgusted and stopped laying

for the time being, although they still continued to use the rock as a roosting place. It was the guano from this countless flock of birds, which probably had been breeding there for centuries, that the men were engaged in collecting. During the day when not fishing they roosted on the sides of the island and when the men left the top to come down to supper at six, they returned to the top of the island to roost and make their so-called nests. Many an evening, as I sat at my skinning table or in front of camp waiting for supper, have I watched these birds as they came in from their day's fishing excursion. From about five o'clock on, as far as the eye could reach, could be seen small flocks of from four to twenty making for the island, and after circling half around it, would generally alight on the top, but a few preferred to roost in the caves in the cliffs of the island.

Numerous visits to the top of the rock were made at night after specimens, and a series of some seven pairs were procured by walking up to them while asleep and selecting individual birds as I chose. I had seen colonies of birds before, but none like this, and the sight certainly made one take a long breath. The whole island surface was literally covered with birds, some with their heads and necks stretched out along their backs sound asleep, some picking up bits of bone, long wing-feathers, grass and small chips of stone and guano to form nests with, while others sat on little piles of heaped-up guano with the neck stretched upward watching the approach of a bird about to alight, as if hoping it might be its mate. They always seemed to roost in pairs, each pair always separated, as were also the nests, by enough space to be out of reach of their neighbor's sharp beaks. It was truly a weird sight in the starlight, and the low hissing sound from the birds that were awake, with the shadowy forms floating through space, reminded one of a grave-yard.

One of the most amusing sights I ever saw was the regular "Mexican cock fight," between males of this species. This combat was, I imagined, over the unmated females, or some single male trying to steal a female from another, and started in this fashion: A male in alighting commenced to strut around, craning his long neck and uttering a low hissing sound, and on coming near to some mated pair, or some other male also trying this mode of courting, would suddenly stop. Both males now squatted low on their short legs, their breast sometimes touching the ground, while their long necks were craned upward in a double bow. No regular cock fight could be more complete or interesting. While they did not use their feet, their long wings and sharp beaks were thrust out at their rival, and occasionally they met with open beaks which became locked together in the struggle. Sometimes one would catch the other by the wing, while he retaliated by getting his adversary by the neck, these cases often proving fatal to one or the other of the combatants. Over all this scene was the ever present smell from the guano, which one must get accustomed to if he would study bird life on an island in the Pacific. Birds with broken wings as well as those with little strength were at daybreak quickly put out of the way by the Caracaras, and the gulls made part of their morning meal of these poor unfortunates.

What a sight this must form when all have eggs or young! Now as the men were gathering the guano from all over the top of the rock, and had, on their arrival, driven off the birds and taken their eggs, and were still making a systematic search every morning for fresh eggs for eating, the colony had been, for the time being, driven from their old nesting place, and few birds had laid during my visit of three weeks on the rock. It was this breaking up of their old-time home that led me to think that some of the birds had migrated to Isabella Island, some thirty miles away, as the only suitable near-by place left to them as a breeding place. As the men expected to be through with the guano gathering by the first of June, possibly the birds remained around the rock and bred later on.¹

11. **Phalacrocorax mexicanus.** MEXICAN CORMORANT.—Numbers of cormorants that I took to be of this species were seen off the rancho, fishing near the surf, and were found to have bred at Tepic previous to my visit there, and also in the lagoons back of San Blas.

12. **Pelecanus californicus.** CALIFORNIA BROWN PELICAN.—These birds were common at San Blas where they sat and fished from the rocky breakwater forming part of the harbor entrance. They were also common off the beach in front of the rancho, often coming on to the beach and seemingly extracting food from the foam cast up by the waves. A few pairs were seen while I was on White Rock, and they probably bred on Cleofa Island later on, as they roosted there. Two pairs were seen while on Isabella Island but none were found breeding. I am inclined to think they came here to fish from the mainland, near the mouth of the Santiago River, where, I was told, there was a large breeding colony.

13. **Fregata aquila.** MAN-O'-WAR BIRD.—This bird I found common everywhere along the coast and islands, in all cases indulging in their well known habit of harassing the boobies to obtain their supply of food. From what I was told by the natives, the birds around San Blas bred on the bushes in a lagoon some miles down the coast, while I found them breeding in great numbers on Isabella Island. The nests on the island were placed on the top of the bushes or on crotches of limbs, the nests being a loosely made platform of sticks and twigs, with generally a few straws or grasses on the inner surface. In some cases the nests were not more than from eighteen inches to two feet above the ground, as on the west side of the island where the bushes are low and stunted, while on the south and eastern sides they were sometimes placed as high as twelve and fifteen feet above ground, the bushes and scrubby trees here permitting of it. At the time of my visit the majority of these birds had eggs, one being a complete set. A few young birds were, however, found on the western side of the island, and it did not take the hot sun

¹ Aug. 14, 1905. Mr. Beermaker, who has just arrived in Los Angeles, informs me that the boobies did not lay again while the men remained on White Rock.

long to kill any small young that the parents left unsheltered for even a few moments. The majority of these birds were very tame, allowing one to approach within a few feet of them.

Great numbers of dead birds, hanging from the bushes by wings, feet or heads, were scattered over the island, the cause of which I discovered when flushing one from its nest. Their short legs and extremely long wings make it a hard matter for the birds to rise from their nests, especially so when the nest is placed on the top of the bushes, and their wings come in contact with other branches in their effort to rise. A number of times as I watched them in their attempts to alight on or depart from their nest, I saw them become entangled in the foliage, from which position they were unable to rise. The odor from the dead birds, with that given out by the birds themselves, was far from agreeable.

I found that the large eggs of these birds required delicate handling in blowing, numbers of them being broken while using air pressure that any small egg the size of a robin's would stand.

14. *Nettion carolinensis*. GREEN-WINGED TEAL.—I saw two pairs of this duck in the arroyo while at Tepic, and the local sportsmen informed me this bird was very common there earlier in the season, at this time (March 30) nearly all having migrated north.

15. *Spatula clypeata*. SHOVELLER.—A flock of four were seen at San Blas.

16. *Aythya affinis*. LESSER SCAUP DUCK.—A flock of birds that I took to be this species were seen on both visits to Mazatlan, where they were very tame and nearly always in the wake of small vessels anchored in the inner harbor. A few were also seen in the estero at San Blas.

17. *Guara alba*. WHITE IBIS.—Very common around the estero at San Blas, and also on the lagoon back of the town.

18. *Plegadis guarauna*. WHITE-FACED GLOSSY IBIS.—Numbers were shot by my friend Mr. Beermaker, and also by the local Doctor, the latter being about the only ardent sportsman in that section.

19. *Ardea herodias*. GREAT BLUE HERON.—A few pairs were seen fishing along the shore in front of the banana ranch, and young birds were brought in by the crew while we were on Isabella Island. I am sure they bred there, as I also saw old birds fishing at the northern end of the island. None were seen while at the Tres Marias Islands.

20. *Herodias egretta*. AMERICAN EGRET.—It must have been this bird about which the natives at San Blas had so much to say, stating that its plumes sold for \$40 gold an ounce. They told me how some men from San Francisco had come down for plumes, and meeting with much success one season, returned the next season prepared to slaughter every one in the country. After building an ark, in which they worked the esterios for some weeks, they were stopped by the Mexican authorities and their stock confiscated. While I did not take any specimens myself, I am confident that the bird described by the natives was this species.

21. *Fulica americana*. AMERICAN COOT.—Numbers of these birds

were seen, and one was shot in the arroyo at Tepic where at the time of my visit they had half grown young.

22. *Tringa minutilla*. LEAST SANDPIPER.—A few stray birds were seen at the mouth of the arroyo and on the beach in front of the banana ranch. While on my way back from Isabella Island a number of flocks which I took to be this species passed our boat going northward.

23. *Ereunetes occidentalis*. WESTERN SANDPIPER.—A single bird of this species was seen at Isabella Island. It evidently had become tired and had dropped out to rest from a migrating flock, no other specimen being seen while on the island.

24. *Totanus flavipes*. YELLOW-LEGS.—During March these birds were quite common at low tide on the estero flats at San Blas, but by the last of April all had disappeared, although a few other waders remained.

25. *Symphemia semipalmata inornata*. WESTERN WILLET.—Common on the estero flats and beaches during all of my stay in that section, and one specimen was also taken on the beach in front of camp at White Rock, March 4.

26. *Numenius hudsonicus*. HUDSONIAN CURLEW.—Quite common and tame on the estero flats at San Blas, numbers being shot by Mr. Beer-maker, the local Doctor and myself, and were relished greatly in that section of the country where good meat is scarce.

27. *Squatarola squatarola*. BLACK-BELLIED PLOVER.—This bird, like the preceding species, was also common on the estero flats, numbers being shot for food.

28. *Ægialitis nivosa*. SNOWY PLOVER.—Two flocks were found on the sandy beach between San Blas and the banana ranch and were very tame, allowing me to come within two or three feet before running off to hide. The beach was an ideal spot for breeding, and they probably remained and bred there.

29. *Hæmatopus frazari*. FRAZAR'S OYSTER-CATCHER.—Birds that I took to be of this species were fairly common on the beaches of the mainland near San Blas, and also on White Rock and Isabella Island. A single specimen shot on White Rock before the loss of my gun, corresponds very closely to *H. palliatus*, but not sufficiently so to refer it to that species. Birds collected by the Biological Survey Expedition of 1897 (see North America Fauna No. 14, Natural History of the Tres Marias Islands, Mex.), both on the mainland and at Tres Marias Islands, were recorded as *H. palliatus*, and possibly those I saw on the mainland were this species.

30. *Jacana spinosa*. MEXICAN JACANA.—Very common in the arroyo at Tepic, and from the birds shot and examined it was evident that they had already bred there previous to my visit on March 30.

31. *Lophortyx douglasi*. DOUGLAS QUAIL.—These handsome little birds, not unlike the California Quail except in color, were very common around San Blas, and as there were few to shoot them, they were quite tame. Flocks of from ten to twenty were flushed a number of times, and

while dusting themselves in the paths they could be approached to within six feet, or even less, before they would take to the brush. This bird was rather scarce near Tepic, as compared to the coast region. Up to the time of my departure, May 17, they had not bred and few had paired.

32. *Ortalis vetula maccalli*. CHACHALACA.—To the right of the ranch house in a small ravine at the foot of the hill stood a tree which during my stay in that section had a green fruit on it about the size of a grape. It was this fruit that the Chachalaca seemed to especially like, and nearly every morning a flock of from six to ten could be found feeding there. The flesh is similar to that of the wild turkey, and the majority of the specimens secured were made into soup during the last illness of W. E. Bryant. Another large flock was seen in a dense jungle between San Blas and the rancho, but up to the time of my departure, May 17, none were found breeding.

33. *Columba flavirostris*. RED-BILLED PIGEON.—Few large flocks were seen, the majority being in flocks of from four to eight, and they always kept well toward the top of the trees. These birds, I was told, breed in the tall timber on the mountain sides back of the rancho, but none were found breeding up to May 17.

34. *Columba flavirostris madrensis*. TRES MARIAS PIGEON.—A few were secured on Cleofa Island, March 10, but after the drenching caused by the canoe upsetting they were hardly fit for the cabinet, so the specimens were eaten with relish by both Mr. Beermaker and myself. This was really the only bird that could be called wild on the islands. They were always found in pairs, and generally in the tops of the tallest trees. No nests were found, as it was too early for any of the land birds to be breeding except the Double Yellow-headed Parrot.

35. *Zenaidura macroura*. MOURNING DOVE.—Quite common on the mainland around San Blas, always keeping on the ground under the dense undergrowth. No nests were discovered up to the time of leaving.

36. *Melopelia leucoptera*. WHITE-WINGED DOVE.—This dove was quite common around the rancho, frequenting the banana grove in search of food, which it secured around the stems of the plants and amongst the fallen leaves. It also was very common under the thick foliage on the uncleared land or in the jungle.

37. *Columbigallina passerina pallescens*. MEXICAN GROUND DOVE.—Flocks of these were quite numerous and tame around the banana ranch, often coming up to the house and under the front porch to pick up grain dropped by the horses while feeding. They were also found in large flocks on the cleared land around San Blas.

38. *Cathartes aura*. TURKEY VULTURE.—Only two pairs were noted during my whole stay on the mainland and these were back of the rancho, but on White Rock they were very common, while the Black Vulture was absent. Their main food on the islands seemed to be, like that of the gulls and caracaras, the victims of the booby fights, with

any decayed animal matter cast up by the waves. They were found breeding on Cleofa Island but none were breeding on White Rock, they preferring the shelter of the trees and shrubbery found on the former island. None were seen on Isabella Island.

39. **Catharista urubu.** BLACK VULTURE.— Very common and very tame on the mainland, where they acted as scavengers and were unmolested. The lower branches of almost every cocoanut palm in San Blas was their roosting place by day and night, and around the slaughter house were so tame that they merely hopped to one side to allow one to pass. The top of the old stone walls of the former Custom House, located on a high bluff, was, I was told, their favorite nesting place, but up to the time of my leaving they had shown no signs of nesting.

40. **Urubitinga anthracina.** MEXICAN BLACK HAWK.— A large tree in a cleared field about a mile and a half back of town, contained a nest and two eggs of this species. Both eggs were pipped at the time of securing them— May 14 — but I was never able to get within gun reach of either of the old birds.

41. **Asturina plagiata.** MEXICAN GOSHAWK.— While walking through a cleared field back of San Blas, April 28, a male of this species was flushed from a large tree and secured. Thinking they might be breeding in a cliff not far off, I turned my steps thither and was rewarded by seeing the nest some 150 to 200 feet up the side of the cliff and in a tree growing out of the side of it. The female was on the nest at the time, and, though I wounded the bird after scaring her from the nest, I was unable to secure her. As the sun was now well up and it was too late in the day to try to make the hard climb, I left and returned early the next morning. A path was followed up the back of the hill to the top, but on coming to a point above the nest I found, to my disgust, that it contained only one egg, and that the nest and tree were placed in such a position that it was really risking one's neck to get it. While I think I should have run the risk had it contained a full set, one egg was not sufficient inducement, so I returned without the egg and with one bird.

42. **Falco columbarius.** PIGEON HAWK.— A single bird was seen a number of times while on White Rock, generally chasing a Red-billed Tropic Bird, but never did I see him capture a bird of this species. While I had my gun I was unable to secure a shot, but later on one of these birds would swoop down on the caracaras and gulls that were feeding on the bodies of specimens I had thrown to them, and become monarch of all he surveyed. It was really amusing to see this little bird take and hold the fort against all comers. Starting from a perch on a jagged rock about 25 feet above my head, it would swoop down over the birds engaged in picking the carcasses to pieces, and, turning on its upward flight, descend and strike at them before they could take wing and get away. Only once did any bird oppose him or show fight and he — a Turkey Vulture — was soon put to route, while the caracaras were more afraid of him than the

gulls. One bird only was seen while on Isabella Island, but after watching him chase a Tropic Bird for some time he made off for the distant Tres Marias Islands and was soon lost to sight.

43. **Falco sparverius** subsp? SPARROW HAWK.—Two females were secured in Tepic. April 1. A pair were also generally found on a dead palm tree stump on the banana ranch where they had had their nest the previous season.

44. **Polyborus cheriway**. AUDUBON'S CARACARA.—A number of pairs were seen on the mainland between the rancho and San Blas. They permitted one to come within twenty feet of them before taking wing.

45. **Polyborus cheriway pallidus**. TRES MARIAS CARACARA.—These birds were very abundant on White Rock during my stay, and also on Cleofa Island where they bred.

46. **Screech Owl**.—A single bird of some species of Screech Owl was flushed from a cavity on Isabella Island, and although I followed it for some distance I was unable to bring it down.

47. **Horned Owl**.—Some species of Horned Owl was heard one night from the porch of the ranch house by both Mr. Bryant and myself, but I was not able to secure it.

48. **Glaucidium phalænoides**. PYGMY OWL.—The pair of birds collected occupied a woodpecker hole in a dead palm stump at the side of the ranch house, and after waiting some little time till I was sure from their actions that they had laid, I cut the hole open April 19. Instead of eggs I found the hole half full of shelled corn, the little fellows having picked it up at night from the ground outside the kitchen where the cook had been sorting it before making torteas. I then gathered in the pair and found no sign of breeding when dissecting them. Several other pairs were seen around the rancho, especially in the dense thickets back of the house, and they seemed to be able to get around in the bright sunlight as well as any other bird.

49. **Amazona finschi**. FINSCH'S PARROT.—These birds were very common around the rancho and their noisy squeak could be heard the last thing before dark and the first thing in the morning as they passed back and forth from the wild fig trees where they were feeding. The palm trees seemed to be their favorite nesting places, and a set of three pure white eggs, about the size of a Belted Kingfisher's, were secured the last week in March. None of this species were noted at San Blas, some eight miles away.

50. **Amazona albifrons**. WHITE-FRONTED PARROT.—This species was very common around the town of San Blas only, none being seen over at the ranch some eight miles away. During the hot part of the day they kept to the palms growing within the town, while in the late afternoon and early morning they could be found feeding in the bushes and trees on the outskirts of the town.

51. **Amazona oratrix**. DOUBLE YELLOW-HEADED PARROT.—This

parrot was very common on Cleofa Island, feeding on the wild figs which at the time of my visit were ripe, but none were seen on the mainland during my stay there, the exception being tame birds of which there were a number.

52. **Conurus canicularis.** RED-AND-BLUE-HEADED PARRAKEET.—Flocks of from four to ten were very common along the coast, and could be seen at all times of day flying back and forth from one feeding ground to another, their constant chatter while on wing, and rapid flight, making them easily distinguishable. The natives kept them on perches in and around their houses as pets, and they soon became very tame and attached to their owners.

53. **Crotophaga sulcirostris.** GROOVE-BILLED ANI.—Abundant around San Blas and Tepic where they were following the cattle and feeding like Cowbirds.

54. **Trogon citreolus.** CITREOLINE TROGON.—Quite common around San Blas, particularly back of the rancho where they kept well to the tops of the tallest trees and from which could be heard at any time of day their familiar whistle.

55. **Momotus mexicanus.** RUFOUS-CROWNED MOTMOT.—By no means common, only three specimens being seen while at San Blas.

56. **Ceryle cabansi.** TEXAN KINGFISHER.—This little bird, while not common, was always found in pairs in the different arroyos, and a nest was discovered in a bank where gravel had been taken out for house building.

57. **Ceryle torquata.** GREAT RUFOUS-BELLIED KINGFISHER.—This handsome bird I found frequenting the arroyo back of the rancho, and it was also seen on White Rock, Tres Marias Islands, as previously mentioned under the heading of *Larus heermanni*.

58. **Ceophlœus scapularis.** MEXICAN PILEOLATED WOODPECKER.—Numbers of these birds were seen in the large timber back of the rancho when first arriving, but as they soon disappeared altogether, I suppose they were migrating.

59. **Centurus elegans.** ELEGANT WOODPECKER.—Quite common around the rancho and also at San Blas where it nested in holes in the palm trees. A pair having their nest in a dead palm stump in front of the ranch house had not laid up to the time of my departure.

60. **Dryobates scalaris graysoni.** GRAYSON'S WOODPECKER.—Quite numerous on Cleofa Island and, like all the other island birds, was very tame. The specimens collected were destroyed by the upsetting of our canoe.

61. **Chordeiles acutipennis texensis.** TEXAN NIGHTHAWK.—Very numerous around San Blas during the week beginning May 10.

62. **Amazilis graysoni.** GRAYSON'S HUMMINGBIRD.—Specimens of this species were secured on Cleofa Island March 10, but owing to my mishap in getting through the breakers I have nothing to show for them.

63. **Iache lawrencei.** LAWRENCE'S HUMMINGBIRD.— One specimen of this species was also secured on Cleofa Island on March 17 but ruined in the general scramble for shore and effort to save other effects.

64. **Tyrannus verticalis.** ARKANSAS KINGBIRD.— A single specimen was taken March 29, during the wave of migrating birds. This species was extremely common during my stay at Tepic.

65. **Tyrannus melancholicus couchi.** COUCH'S KINGBIRD.— Quite common around San Blas, being one of the first of the smaller birds to breed. Large flocks of these were seen at Tepic, March 30 to April 5, going northward.

66. **Pitangus derbianus.** DERBY FLYCATCHER.— This was one of the commonest birds around San Blas and the rancho, and also at Tepic, and its nest could be found in almost every thorny tree. Few nests up to the time of my departure contained eggs, of which I examined some twenty-five or more.

67. **Myiarchus lawrenceii.** LAWRENCE'S FLYCATCHER.— A pair was shot at San Blas, March 25, and while not common, a number of pairs were seen.

68. **Myiarchus lawrenceii olivascens.** OLIVACEOUS FLYCATCHER.— Numbers were seen during both trips to Cleofa Island, being unusually tame. One specimen was secured, but shared the fate of all the other specimens taken on this island.

69. **Cissilopha san-blasiana san-blasiana.** SAN BLAS JAY.— This bird was quite common around San Blas and the rancho, it nesting in the tall trees bordering the arroyo back of the latter place.

70. **Corvus mexicanus.** MEXICAN CROW.— No palm tree seemed complete without a pair of these birds as regular residents. They seemed to roost always in the same palm, and later on nested in the place occupied by them the previous year. They were very tame, allowing one to come within ten feet or even less before hopping or flying to one side, and their plaintive little cry could be heard from the house tops or trees in the garden any time of day. During the time the wild figs were ripe, these seemed to be their main article of food, and I have seen as many as forty in one small tree at a time. Nest building was still being carried on at the time of my departure.

71. **Tangavius æneus æneus.** BRONZED COWBIRD.— Quite numerous in flocks at San Blas, especially around a slaughter house with cattle yards adjoining. No birds of this species were seen while at Tepic.

72. **Cassidix melanicterus.** MEXICAN CACIQUE.— This beautiful oriole was very common around San Blas and the rancho, in fact the commonest bird in that section. A large number of nests were inspected before my departure but none had eggs, although some had been finished a week or more. One bird having a nest in a tree at the side of the ranch house had been building for some six weeks, and although it seemed finished and the birds had stopped carrying in material, no eggs had been deposited

two weeks later. One of the finest nests I saw, and now in my collection, was attached to the end of a cocoanut palm leaf and measured three feet three inches in length.

73. *Icterus pustulatus*. SCARLET-HEADED ORIOLE.—This species, while not quite so common as the preceding, was nevertheless not scarce, and almost every thorn tree that contained a nest of the former species would be sure to have a nest of this species also. The majority of the nests were empty, although some good sets were secured, among them one with the egg of a Bronzed Cowbird.

74. *Icterus graysoni*. GRAYSON'S ORIOLE.—Specimens of this bird were secured easily on Cleofa Island during both trips but were unfortunately lost with the other specimens. I had hardly cut my way through the cacti at the entrance to a small arroyo on the island before one of these birds came down from a topmost branch to inquire as to what this strange proceeding might be. On sitting down and chirping to it I was almost able to get within arm's reach, and when I was walking up the cañon numbers of these birds showed but little fear of me.

75. *Megaquiscalus major obscurus*. COLIMA BOAT-TAIL.—According to Ridgway's 'Birds of North and Middle America,' Part II, page 241, specimens taken at San Blas are now referred to this species. These birds were very common, almost as much so as barnyard fowls. They would come in under the tiled roofs and descend to the floor of my room, while many times I sat at the dining table and watched one or a pair fly on to the bread basket and commence picking at a piece, sometimes even on to the table. It was a pleasure while sitting at the table to snap small pieces of bread on to the floor and watch them race for and greedily devour it. The meat hanging on the racks of the out door markets or stalls was reduced many a pound by these birds. Often while in San Blas I saw as many as ten or twelve clinging to the pieces of meat and picking away for dear life, unmolested. During the first part of May many were breeding and most of the trees around town had their full share of nests. One tree from which I took a series of eggs stood next to the Custom House, almost in the middle of the street, and about a week later the same nests all had eggs in them again.

76. *Carpodacus mexicanus* subsp.? HOUSE FINCH.—A pair was taken at Tepic March 29.

77. *Spizella socialis* subsp.? CHIPPING SPARROW.—A single bird was taken at Tepic the last day of March and numbers of others were seen, all apparently migrating.

78. *Guiraca cærulea lazula*. WESTERN BLUE GROSBEAK.—A female of this species was secured during my stay in Tepic which, with other small birds, seemed to be migrating northward.

79. *Saltator plumbeiceps*. GRAYSON'S SALTATOR.—A male was secured at Tepic.

80. *Ampelis cedrorum*. CEDAR WAXWING.—A pair was secured from a large flock while at Tepic and a few were noted eating the wild figs back of the ranch house.

81. **Dendroica auduboni.** AUDUBON'S WARBLER.—A female was taken at Tepic, apparently migrating northward.

82. **Icteria virens longicauda.** LONG-TAILED CHAT.—A male was taken at Tepic during the migration of small birds.

83. **Mimus polyglottos leucopterus.** WESTERN MOCKINGBIRD.—A pair were seen at Tepic, but not secured.

84. **Cardinalis cardinalis mariæ.** TRES MARIAS CARDINAL.—One specimen, a male, was saved from the specimens taken on Cleofa Island March 10 and 17 but it is very much bedraggled. This bird I generally found down toward the shore of the island near the little fresh-water streams, and it was generally as tame as the Grayson's Oriole.

85. **Pheugopedius felix.** HAPPY WREN.—This little bird was very common around San Blas and fairly common around Tepic. Numbers of nests of this species were discovered, generally in the lower limbs of the thorny trees occupied by the orioles and Derby Flycatchers. The nest was generally a long tube constructed of fine grass and stopped up at one end. This was bent over a limb and a few grasses fastened it in place or kept it from slipping over after the little wren had entered by the other end. In other words, the nest was a complete elbow, the entrance on the under side of one end, while over the limb and down in the other end was the nest proper, where the eggs were deposited. I must have examined at least twenty of these nests, but up to the time of my departure none had eggs, while all seemed finished.